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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,637

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Philippe Delmas

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EXAMINER

LEPISTO, RYAN A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,637	Applicant(s) DELMAS ET AL.	
	Examiner RYAN LEPISTO	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 8 and 9 are objected to because of the following informalities: Both of these claims state a process when the claim they depend from is a geosynthetic fabric. Please change the preamble to match the parent claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Underwood et al (US 5,723,857)** (Underwood) in view of **Kersey (US 6,274,863 B1)**.

Underwood teaches a geosynthetic fabric (Figs. 1A, 1B, 2, 3) for and the process of locating and measuring deformations in a civil engineering structure (column 1 lines 17-20, column 3 lines 1-3) comprising a geosynthetic fabric (12) having a plurality of optical fibers (2) including a protective sheath (8) to protect against failure laid in the direction of the fabric (12) in parallel with each other and capable of transmitting signals and having Bragg gratings (37) evenly spaced in series wherein the signals of the fibers (2) and reflected by the Bragg gratings (37) enables location of deformations by measuring the elongation of the fibers at those areas (column 3 lines 1-40).

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Underwood does not teach expressly the number of consecutive gratings that correspond to a different wavelength to the number of gratings of a series of a fiber and the number of series of a set are determined so the measurements of differences between the wavelengths of the incident light transmitted in each fiber and reflected by the gratings enable the deformations to be located.

Kersey teaches a sensor array (Figs. 2-5) comprising fibers (220-234) having Bragg gratings (202-218) arranged along the fibers wherein locations deformations are determined by comparing the number of consecutive gratings that correspond to a different wavelength to the number of gratings of a series of a fiber and the number of series (Sub-Groups) of a set are determined so the measurements of differences between the wavelengths of the incident light transmitted in each fiber and reflected by the gratings enable the deformations to be located wherein the numbers of series of a set can be prime to each other (Fig. 2, has 2 to 5 series; column 3 lines 55-65, column 4 lines 5-40) or equal to each other (Fig. 3, has 3 each; column 4 line 61-column 5 line 16).

Underwood and Kersey are analogous art because they are from the same field of endeavor, fiber grating sensors.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the process of locating locations taught by Kersey in system taught by Underwood since both teach measuring the signal wavelength reflected by multiple gratings to locate deformations.

The motivation for doing so would have been to variable level configuring of groups by being able to optically sum several fibers at one wavelength and compare that to individual fibers at another wavelength (Kersey, column 4 lines 41-50).

With regard to claim 7: The claim only adds process limitations to the product claim and therefore since the structural limitations are met, the claim limitations are met since the method of making the structure is moot in this product claim. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted)

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garner, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979).

Response to Arguments

Applicant's arguments filed 8/6/08 have been fully considered but they are not persuasive.

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In general, applicant makes argument concerning each reference individually without considering the rejection was made as a combination between two references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to the argument that Underwood does not relate to monitoring of a work of civil engineering: As stated in the rejection, Underwood teaches monitoring of the structural integrity of structures. Without any specific definition of "civil engineering" in the specification, the integrity of structures are construed as being in the broad umbrella of "civil engineering".

In response to the argument that Underwood does not teach the use of geosynthetic material: Without any specific definition of "geosynthetic" in the specification, it is considered a synthetic fabric used to solve civil engineering problems. The fabric of Underwood is made of optical fiber ribbon material, which is certainly not a natural material and therefore is considered synthetic. The discussion as to "civil engineering" was already discussed.

In response to the arguments related to Kersey on page 7: These arguments discuss to Kersey reference without discussion of the combination of Underwood and Kersey and does not specifically state what claim limitations are not taught. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to the argument that Kersey does not indicated explicitly that the fiber gratings include the same N1 number of gratings: Each subgroup is chosen to have the same number of gratings, for example, Fig. 3 shows having three each (column 4 lines 61 - column 5 line 16).

In response to the argument that Kersey does not teach Bragg gratings regularly spaced, several series of N1 gratings: In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., regularly spaced gratings, several series (N1 can be equal to 1 resulting on only 1 set) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the argument that Kersey does not teach identical sets of N2 consecutive series corresponding to different wavelengths: The identical sets of consecutive series corresponding to different wavelengths are the number of consecutive gratings (groups seen at that particular wavelength) that correspond to a different wavelength to the number of gratings of a series of a fiber and the number of series (Sub-Groups) shown in Figs. 2-6.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-Th 7:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Lepisto/
Examiner, Art Unit 2883

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883